



2015 Block Island Saves Pre-Pilot Results

*Block Island
Saves*



*An Energy Efficiency Program for New Shoreham
Residents and Small Businesses*

www.energy.ri.gov



EXECUTIVE SUMMARY

Block Island Saves is an energy efficiency program administered by the Rhode Island Office of Energy Resources (OER) for New Shoreham (also known as Block Island) businesses and year-round residents. Funded with state Regional Greenhouse Gas Initiative (RGGI) auction proceeds, the Program aims to educate island residents and businesses about the many benefits of reducing energy consumption, and to provide access to a suite of efficiency measures and incentives that can reduce energy costs.

The Program consists of two stages: a targeted pre-pilot stage (through 2015) and a more robust full pilot initiative, which will begin in Spring 2016. The pre-pilot stage was completed in early 2016, the results of which are described in this report. The goal of the pre-pilot was to provide OER with an initial opportunity to engage the community; test its program delivery model; and gather valuable insight and data.

The pre-pilot results indicate a large potential for both electric and thermal savings and a high interest in energy efficiency on the island. Overall, the pre-pilot program offerings were found to be cost-effective and successfully motivated participants to install energy efficient measures. Therefore, program offerings will remain the same for the full 2016 pilot.

PRE-PILOT DESCRIPTION & HIGHLIGHTS

- ◆ New Shoreham businesses and year-round residents were encouraged to submit participation applications
- ◆ A total of twenty-four (24) applications were received by OER
- ◆ Ten (10) residential and five (5) small business participants were selected
- ◆ Applicants not selected for the pre-pilot remain eligible for program participation in 2016
- ◆ All selected applicants received a free energy assessment which provided them with recommendations on how to improve the energy efficiency of their property
- ◆ Efficiency measures installed through the pre-pilot will save a total of 91,852 kWh and 283 MMBtu per year
- ◆ Savings were achieved at a cost of \$0.03/kWh saved for residential participants and \$0.05/kWh saved for small business participants. In 2015, general service customers on the Island paid \$0.2652/kWh for their energy charge while residential customers paid \$0.2399/kWh.

PRE-PILOT OFFERINGS



Photo By: Timothy J. Quill

Pre-Pilot Small Business Offerings

A no-cost, no-obligation on-site energy survey of a facility's electrical equipment and thermal systems

A proposal outlining recommended energy efficiency improvements based on the site analysis

Incentives for approved electrical measures covering up to 70% of installation and equipment costs

Lighting upgrades (LED screw-ins and linear lamps)

Removal and proper disposal of replaced fluorescent lamps and ballasts

Lighting occupancy controls sensors, if applicable

Walk-in Cooler efficiency measures, if applicable

Programmable and WiFi capable thermostats

Building controls (rooftop optimizers, EMS & VFD's, where applicable)

Air sealing, if applicable – up to \$1,200 in free air sealing plus 40% off further sealing, up to \$4,200 in total weatherization costs

Insulation, if applicable – 40% cost coverage, up to \$3,000 total insulation costs

Pre-Pilot Residential Offerings

A no-cost, no-obligation Home Energy Audit conducted by a trained energy professional

Lighting upgrades (LEDs & CFLs) to replace less-efficient incandescent bulbs

Air sealing, if applicable – up to 10 hours free (a \$800 value) plus 40% off further sealing, up to \$2,000 in total weatherization costs

Insulation, if applicable – 40% cost coverage, up to \$2,000 total weatherization costs

Pipe insulation for heat/hot water pipes – free 6 feet from a water heater

Advanced power strip (maximum of 2 free)

Low flow/aerator faucets and shower heads (free)

Nest Programmable and WiFi capable thermostats installed (\$200 customer co-pay)

Furnace and boiler upgrade recommendations

Water heater upgrade recommendations

Appliance, dehumidifier, and air cleaner upgrade recommendations

A Home Energy Action plan which includes information and tips on how to save energy and reduce overall energy costs

The audit will also include health and safety testing of heating equipment as well as a blower door test

PRE-PILOT EQUIPMENT REBATES

- \$250 or \$500 efficient air conditioning rebates (rebate varies with efficiency level)
- \$50 rebate for programmable thermostats for use with energy efficient AC units
- \$250 or \$500 efficient oil heating equipment rebates (rebate varies with efficiency and equipment type)
- \$300 rebate for an efficient oil-fired indirect water heater
- \$100-\$500 rebates for efficient propane hot water equipment (rebates vary with efficiency and equipment type)
- \$300-\$2,000 rebates for efficient propane heating equipment (rebates vary with efficiency and equipment type)

PRE-PILOT RESULTS

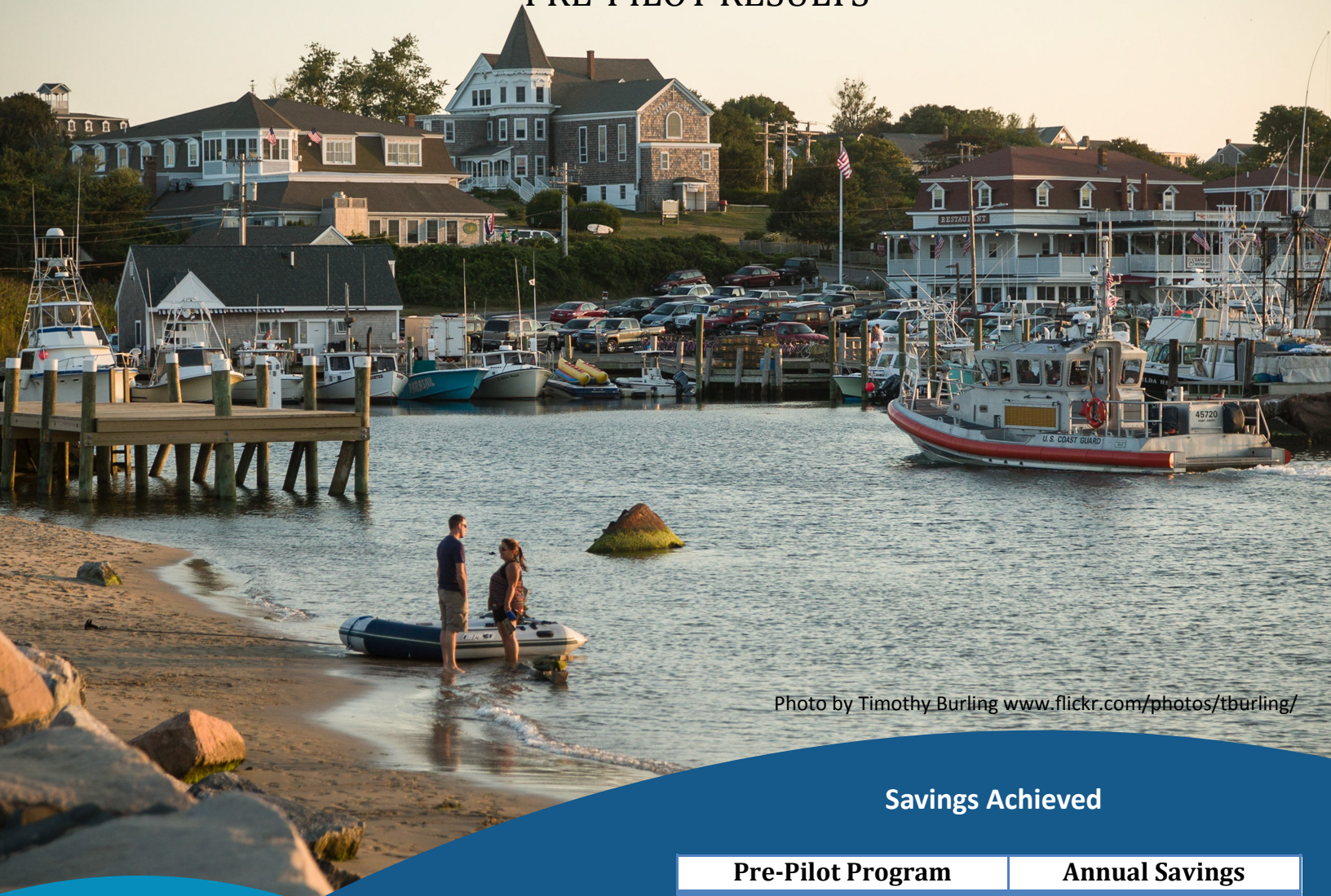


Photo by Timothy Burling www.flickr.com/photos/tburling/

Highlights

- ◆ Eight (8) out of ten (10) residential participants had weatherization opportunities
- ◆ Four (4) of the eight (8) residential properties installed recommended weatherization measures
- ◆ Only one (1) of the five (5) small businesses received weatherization recommendations
- ◆ All five (5) small businesses had significant lighting upgrade opportunities
- ◆ All five (5) small businesses completed the recommended lighting upgrades

Savings Achieved

| Pre-Pilot Program | Annual Savings |
|-------------------------------|----------------|
| Small Business Program | |
| Direct Install | 63,385 kWh |
| Weatherization | 86 MMBtu |
| Residential Program | |
| Direct Install | 28,467 kWh |
| Weatherization | 197 MMBtu |

Total Annual kWh Saved:

91,852

Total Annual MMBtu Saved:

283

Pre-Pilot Total Resource Cost Test, Benefit-Cost Ratio (BCR):

1.64

Overall, the pre-pilot achieved more savings than anticipated. Substantial electric and thermal opportunities were found in both residential and small business settings. Although program costs were higher due to transportation costs to and from the island, the higher-than-expected energy savings helped the pre-pilot to pass the total resource cost test. The benefit-cost ratio of 1.64 verifies that the benefits generated from implementing energy efficiency programs on Block Island are greater than the total costs to install the efficiency measures.

The cost per lifetime kWh saved for the pre-pilot was \$0.03 in residential settings and \$0.05 in small businesses, not including customer costs. This is similar to the roughly \$0.03 per kWh saved that was achieved by mainland energy efficiency programs in 2015¹. By comparison, energy generated on the island has cost at least \$0.20 per kWh over the past year (2015)².



The full program will be opened in April 2016 to all island small businesses and year-round residents

Recommendations for the Future

The pre-pilot successfully tested the interest and opportunity for energy savings on Block Island.

Based on the savings achieved, the overall program benefit-cost ratio, and the general interest displayed by solicited islanders, the full pilot is scheduled to launch in April 2016. The year-long full pilot will offer the same incentives and rebates as the pre-pilot and will be open to all small businesses and year-round residents on Block Island³.

For more information on the Block Island Saves program, please visit energy.ri.gov.

¹RI Energy Efficiency, 4th Quarter National Grid Report [http://www.ripuc.ri.gov/eventsactions/docket/4527-NGrid-Q4-2015-Rept\(2-8-16\).pdf](http://www.ripuc.ri.gov/eventsactions/docket/4527-NGrid-Q4-2015-Rept(2-8-16).pdf)

²Generation costs were estimated to be the average fuel surcharge price per kWh charged by BIPCo in 2015

³Pending funding availability

Photo by Whitney from Scottsdale, USA - <https://www.flickr.com/photos/49503011663@N01>



STATE OF RHODE ISLAND

OFFICE OF ENERGY RESOURCES

The Office of Energy Resources (OER) works closely with private and public stakeholders to increase the reliability and security of our energy supply, reduce energy costs and mitigate price volatility, and improve environmental quality. Rhode Islanders spend over \$3 billion per year on energy to light their homes, keep the heat on, and fuel their vehicles. Fossil fuels, such as natural gas, fuel oil, and gasoline, supply the vast majority of these energy needs. By recommending and implementing smart energy policies, OER helps reduce Rhode Island's dependence on these out-of-state fuels, advancing our State as a national leader in the new clean energy economy.

OER operates at the nexus of the many ongoing efforts to transform the Ocean State energy system. Some core functions of the office include:

- Developing, administering, and monitoring a variety of programs designed to promote energy efficiency, renewable energy, alternative fuels, and energy assurance.
- Offering technical assistance and funding opportunities for end-users including residents, businesses, and municipalities.
- Providing policy expertise and support related to strategic energy planning, energy assurance, and clean energy workforce development.
- Leveraging, coordinating, and aligning inter-agency, public-private, regional, and federal efforts to reach and exceed energy goals.

OER would like to acknowledge the leadership of Governor Gina Raimondo, Senator V. Susan Sosnowski, Representative Blake Filippi, and the New Shoreham Town Council, whose support has helped make this program possible!

OER would also like to acknowledge National Grid's continuing support for this initiative.

Supplemental Block Island Information:

| Building Type | Number of Buildings |
|--------------------|---------------------|
| Residential | 1412 |
| Single Family | 1060 |
| Multifamily | 11 |
| Seasonal | 329 |
| Other | 12 |
| Commercial | 146 |
| General | 79 |
| Farm | 1 |
| Lodging | 57 |
| Other | 9 |
| Public | 34 |

According to the 2010 U.S. Census there are 514 permanent households on Block Island.

Data Source: Rhode Island Geographic Information System (RIGIS) <http://www.edc.uri.edu/rigis/data/data.aspx?ISO=structure>